REMARKS/ARGUMENTS

I. Introduction

Receipt is acknowledged of the Non-Final Office Action mailed August 1, 2003 (Paper No. 13). In response to the Examiner's restriction requirement, claims 1, 11, and 12 were elected. Claims 2-20 and 13-22 are canceled without prejudice or disclaimer. Claims 23 and 24 are added. Claims 1, 11, 12, 23 and 24 are pending in the application.

II. Applicants' Response to the Examiner's Objections and Rejections

A. Objections

In response to the Examiner's objection of claim 1 because it is not clear how the cell lines are "derived" from normal tissue, Applicants point out that use of the word "derived" from normal tissue in this context means: obtainable by using cell biology techniques well known in the art, starting with biopsy or autopsy samples of normal, non-diseased (specifically, non-cancerous) tissue.

B. Rejections Under 35 U.S.C. § 112, first paragraph

1. Enablement

At pages 3-8 of the Office Action, the Examiner has rejected claims 1, 11, and 12 under 35 U.S.C. § 112, first paragraph, as lacking an enabling disclosure. Without acquiescing in the rejection, Applicants respectfully traverse the rejection and make the following arguments.

The Examiner argues at page 4, paragraph 2, that a decrease in PSA level is not necessarily an indication that prostate cancer cell growth is inhibited. However, Applicants point

out that it is well-known in the prior art that PSA functions as a surrogate indicator of disease progression. For example, Wu et al., at p. 892, teach a correlation between serum PSA and "disease progression". Wu et al., Intl. J. Cancer, 77(6): 887-94, 1998 (cited in the Non-Final Office Action of August 1, 2003). PSA velocity (PSAV) and doubling time (PSADT) are important prognostic markers. *See* accompanying Walker Declaration. Furthermore, reduced PSA levels cannot be the consequence of an anti-PSA antibody response with subsequent removal of the antibody/PSA complex.

At page 4, paragraph 4 of the Office Action, the Examiner asserts that it is unpredictable that the cell lines retain the necessary antigens to provide efficacy as an immunotherapeutic agent. Such unpredictability is addressed in the present invention by the provision of different cell lines. *See* page 6 of the specification. Applicants also possess data from human prostate cancer clinical trials using two different vaccine constructs, mouse melanoma, mouse prostate and mouse renal cancer. *See* Walker Declaration. All data points to the general principle that the use of an immortalized normal cell line is a useful invention that can be applied across many different tumors.

The Examiner argues at page 8, paragraph 2 of the Office Action, that an effective chemotherapeutic must selectively kill tumor cells, the molecular alterations that provide selective tumor cell killing are unknown, and the detailed molecular mechanism by which a drug acts often provides little insight into why the treated tumor cell dies. This is not quite accurate, however. Chemotherapeutic agents function by killing rapidly dividing cells, which includes cancer cells. Normal, rapidly dividing cells also are killed by chemotherapeutic agents, which is why cancer patients often lose their hair during treatment. In any event, the examiner's concerns

do not pertain to immunotherapeutic agents, as in the claimed invention, because immunotherapeutic agents do not rely upon toxicity to dividing cells, but rather work through stimulation of the immune system.

In response to the Examiner's assertions at page 8, paragraph 3, that the present invention requires undue experimentation, Applicants point out that 35 USC § 112 mandates that patent applications contain the "manner and process of making and using" the invention. An enablement rejection can only be supported when the experimentation needed to practice the claimed invention is considered "undue" in the field. Accordingly, in making a rejection, the Examiner must distinguish between routine work and undue experimentation. *See* MPEP § 2164.06 (Rev. 1, February 2000). The undue experimentation test is not whether experimentation is necessary, but whether any experimentation would be undue in view of what type and amount of experimentation is usual in that particular field. *See* MPEP §§ 2164.05 (a-b), 2164.06 (Rev. 1, February 2003). Courts have considered applications in compliance with section 112 where one of ordinary skill in the art can practice the invention without undue experimentation. *See Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 94 (Fed. Cir. 1986). Thus, routine design choices cannot be equated with non-enablement.

The "Utility Guidelines" pursuant to MPEP § 706.03(a)(1)(B)(1) instruct an Examiner that, "[i]f the applicant has asserted that the claimed invention is useful for any particular purposes (*i.e.* a 'specific utility') and that assertion would be considered credible by a person of ordinary skill in the art, do not impose a rejection based on lack of utility." *See* Utility Examination Guidelines, 66 Fed. Reg. 1092 (January 5, 2001). As explained by the Federal Circuit in considering the intertwined issues of enablement and utility:

> [I]t follows that the PTO has the initial burden of challenging a presumptively correct assertion of utility in the disclosure. Only

> after the PTO provides evidence showing that one of ordinary skill in the art would reasonably doubt the asserted utility does the burden shift to the applicant to provide rebuttal evidence sufficient to convince such a person of the inventor's asserted utility. * * * Taking these facts – the nature of the invention and the PTO's proffered evidence – into consideration we conclude that one skilled in the art would be without basis to reasonably doubt applicants' asserted utility on its face. The PTO has not satisfied its initial burden. ***Accordingly, applicants should not be required to substantiate their presumptively correct disclosure to avoid a rejection under the first paragraph of § 112.***

In re Brana, 34 USPQ2d 1436, 1441 (Fed. Cir. 1995) (emphasis added), *citing In re Marzocchi*, 169 USPQ 367, 369-70 (CCPA 1971). The burden of establishing a Section 112 enablement rejection rests with the Examiner. *See* MPEP §§ 2164.01; 2164.04 (August 2001). Applicants submit that the Examiner has not met this burden. The instant specification discloses the use of several different cell lines for use in treating prostate cancer. *See, e.g.,* page 6 of the specification. In fact, Applicants even provide citations to relevant journal references relating to the use of cell-based cancer vaccines at page 4, paragraphs 2 and 6 of the specification. These references teach the use of cell-based cancer vaccines based on prostate cell lines. Thus, the skilled person at the time of this invention was well-equipped to use the procedures mentioned in such references. Accordingly, Applicants do not see how the skilled person relying on applicants' specification would need to incur undue experimentation in performing procedures commonly undertaken in the field. Rather, the efforts involved would be considered routine -- thus not undue -- and therefore the rejection should be withdrawn.

Applicants thus submit that upon applying the logic of *In re Brana*, claims 1, 11, and 12 of the instant invention would be enabled, particularly in view of the data provided in the specification. Applicants therefore request withdrawal of the enablement rejection.

2. Scope

The Examiner rejected claims 1, 11, and 12 under 35 U.S.C. § 112, first paragraph, at pages 8-11 of the Office Action. Without acquiescing in the rejection, Applicants respectfully traverse these rejections and make the following arguments.

The Examiner argues at page 8, paragraph 4, that claims 1, 11, and 12 are not enabled for an allogeneic immunotherapeutic agent for the treatment of prostate cancer, comprising "any" three prostate cell lines from three different sources derived from non-cancerous prostate, and at page 4, paragraph 3 that one cannot extrapolate treatment results in normal mouse melanoma to treatment of mouse prostate cancer. Beyond the examples of specific vaccines which have been disclosed in the instant application, other experiments, using other animals and/or cancers, have shown that the teachings of the instant specification can apply to many combinations of cells. *See* Walker Declaration.

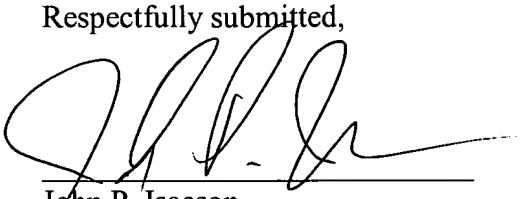
The Examiner argues at page 11, paragraph 2 of the specification, that it is not clear how prostate cancer could be treated with prostate cancer cell lines LnCaP and NIH-1542 that are alive because those prostate cancer cell lines would grow and form cancer when injected into a patient. In response, Applicants point out that because the claimed vaccine cells are mismatched to the patient being treated, and thus they will be rejected and will not cause tumors.

In light of the above arguments, withdrawal of the scope rejection of claims 1, 11, and 12 under 37 U.S.C. § 112, first paragraph is respectfully requested. Applicants believe that claims 1, 11, and 12 are fully supported by the disclosure, patentable over the prior art, and in condition for allowance.

III. Conclusion

In light of the above remarks and arguments, Applicants respectfully request that all objections and rejections be withdrawn and that a timely Notice of Allowance be issued in this application. Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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Date

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